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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,241	10/20/2003	Syed Shoaib Hasan Zaidi	02 P 50491 US/INTECH 3.0-	3840

48154 7590 11/02/2005

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EXAMINER	
STAFIRA, MICHAEL PATRICK	
ART UNIT	**PAPER NUMBER**
2877	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/689,241	ZAIDI, SYED SHOAIB HASAN	
	Examiner	Art Unit	
	Michael P. Stafira	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/25/05;11/5/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on September 23, 2004. These drawings are approved by the examiner of record.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6-10, 12-19, 21-31, 33-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Watkins et al. ('383).

Claim 1

Watkins et al. ('383) discloses directing a light beam (Fig. 1, Ref. 22) onto a lenslet array (Fig. 1, Ref. 44) comprised of at least two lenslets (Fig. 1, Ref. 44); and dividing the light beam into at least two light rays (Fig. 2, Ref. 52) and directing said light rays onto said substrate (Fig. 1, Ref. S) using said lenslet array (Fig. 1, Ref. 44); said lenslets of said lenslet array (Fig. 1, Ref. 44) each directing a respective one of said light rays onto a corresponding region (Col. 4, lines 23-28) of said substrate (Fig. 1, Ref. S) that includes a feature formed on said substrate (Fig. 1,

Ref. S); said width of said region and said width of said feature being substantially equal (Col. 3, lines 41-48).

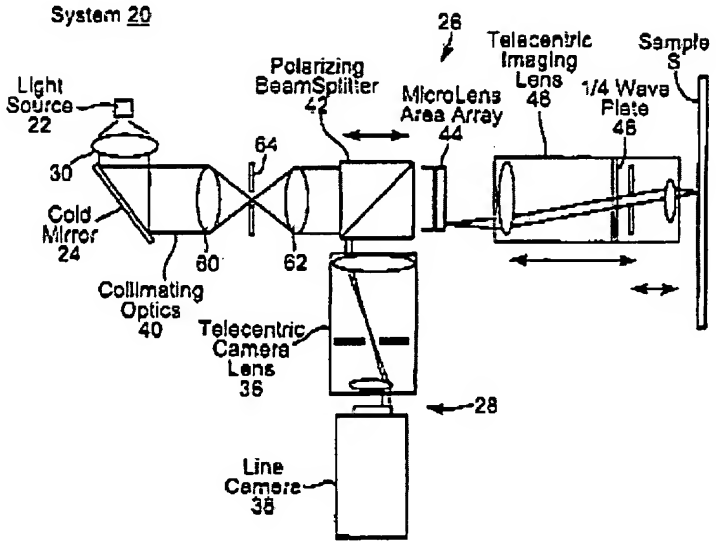

Fig. 1

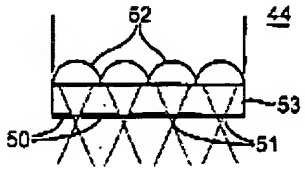

Fig. 2

Claim 2

Watkins et al. ('383) further discloses measuring a property of said feature using light detected from said feature (Col. 5, lines 61-65).

Claim 3

The reference of Watkins et al. ('383) further discloses wherein adjacent ones of said light rays are directed by said lenslets of said lenslet array onto adjacent features formed on said substrate (See Fig. 3a).

Claim 4

Watkins et al. ('383) further discloses the light rays are directed by said lenslets of said lenslet array onto said substrate at an angle normal to a surface of said substrate (See Fig. 1).

Claim 6

The reference of Watkins et al. ('383) further discloses the light rays are focused by said lenslets of said lenslet array at said substrate (See Fig. 1).

Claim 7

Watkins et al. ('383) discloses directing a light beam (Fig. 1, Ref. 22) onto a lenslet array (Fig. 1, Ref. 44) comprised of a plurality of lenslets (Fig. 1, Ref. 44); and dividing the light beam into a plurality of light rays (See Fig. 3a) and directing each of said light rays onto said substrate (Fig. 1, Ref. S) using said lenslet array (Fig. 1, Ref. 44); said lenslets of said lenslet array (Fig. 1, Ref. 444) each directing a respective one of said light rays onto a corresponding region of said substrate that includes a feature formed on said substrate (See Fig. 3a); adjacent lenslets of said lenslet array directing adjacent ones of said light rays onto adjacent features formed on said substrate9 See Fig. 3a).

Claim 8

Watkins et al. ('383) further discloses measuring a property of said features using light detected from said features (Col. 5, lines 60-65).

Claim 9

Watkins et al. ('383) further discloses the lenslet array comprises a two dimensional array of lenslets (See Fig. 1, Ref. 44).

Claim 10

The reference of Watkins et al. ('383) further discloses the light rays are directed by said lenslets of said lenslet array onto said substrate at an angle normal to a surface of said substrate (See Fig. 1).

Claim 12

Watkins et al. ('383) further discloses the light rays are focused by said lenslets of said lenslet array at said substrate (See Fig. 3a).

Claim 13

Watkins et al. ('383) directing a light beam (Fig. 1, Ref. 22) onto a lenslet array (Fig. 1, Ref. 44) comprised of at least two lenslets (Fig. 1, Ref. 44); and dividing the light beam into at least two light rays (See Fig. 2) and directing said light rays onto said substrate (Fig. 1, Ref. S) using said lenslet array (Fig. 1, Ref. 44); measuring a property of at least one feature using light detected from said feature (Col. 5, lines 61-65); said lenslets of said lenslet array (Fig. 1, Ref. 44) each directing a respective one of said light rays onto a corresponding region of said substrate that includes a feature formed on said substrate (See Fig. 3a).

Claim 14

Watkins et al. ('383) further discloses the property is selected from the group consisting of a line height (Col. 5, lines 59-65).

Claim 15

The reference of Watkins et al. ('383) further discloses the light detected from said feature is selected from the group consisting of reflected light (See Fig. 1).

Claim 16

Watkins et al. ('383) further discloses a width of said corresponding region and a width

of said feature of said substrate are substantially equal (Col. 4, lines 23-29).

Claim 17

The reference of Watkins et al. ('383) further discloses the adjacent ones of said light rays are directed by said lenslets of said lenslet array onto adjacent features formed on said substrate (See Fig. 3a).

Claim 18

Watkins et al. ('383) further discloses the lenslet array comprises a two dimensional array of lenslets (See Fig. 1, Ref. 44).

Claim 19

Watkins et al. ('383) further discloses the light rays are directed by said lenslets of said lenslet array onto said substrate at an angle normal to a surface of said substrate (See Fig. 1).

Claim 21

Watkins et al. ('383) further discloses the light rays are focused by said lenslets of said lenslet array at said substrate (See Fig. 3a).

Claim 22

The reference of Watkins et al. ('383) further discloses focusing said light detected from said features using a further lenslet array comprised of at least two further lenslets 9See Fig. 1, Ref. 44).

Claim 23

Watkins et al. ('383) further discloses a lenslet array (Fig.1 Ref. 44) comprising at least two lenslets (Fig.1, Ref. 44), said lenslets of said lenslet array (Fig. 1, Ref. 44) dividing an incident light beam into at least two light rays (See Fig. 2), said lenslets of said lenslet array (Fig.

1, Ref. 44) each directing a respective one of said light rays onto a corresponding region of said substrate (Fig. 1, Ref. S) that includes a feature formed on said substrate (See Fig. 3a); and a detection system (Fig. 1, Ref. 38) operable to measure a property of said feature using light detected from said feature (Col. 5, lines 61-65).

Claim 24

Watkins et al. ('383) further discloses the property is selected from the group consisting of a line height (Col. 5, lines 61-65).

Claim 25

Watkins et al. ('383) further discloses the light detected from said feature is selected from the group consisting of reflected light (See Fig. 1).

Claim 26

The reference of Watkins et al. ('383) further discloses a control system operable to control an orientation of said lenslet array (See arrows in Fig. 1).

Claim 27

Watkins et al. ('383) further discloses a control system operable to process a measured value received from said detection system (Col. 3, lines 34-39).

Claim 28

Watkins et al. ('383) further discloses a width of said corresponding region and a width of said feature of said substrate are substantially equal (Col. 4, lines 23-29).

Claim 29

Watkins et al. ('383) further discloses the lenslets of said lenslet array direct adjacent ones of said light rays are onto adjacent features formed on said substrate (See Fig. 3a).

Claim 30

The reference of Watkins et al. ('383) further discloses the lenslet array comprises a two dimensional array of lenslets (See Fig. 1, Ref. 44).

Claim 31

Watkins et al. ('383) further discloses the lenslets of said lenslet array direct said light rays onto said substrate at an angle normal to a surface of said substrate (See Fig. 1).

Claim 33

Watkins et al. ('383) further discloses the lenslets of said lenslet array focus said light rays at said substrate (See Fig. 3a).

Claim 34

Watkins et al. ('383) further discloses the detection system includes a further lenslet array (Fig. 1, Ref. 44) operable to focus said light detected from said features, said further lenslet array being comprised of at least two further lenslets (Fig. 1, Ref. 44).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5, 11, 20, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watkins et al. ('383) in view of Hendler et al. ('212).

Claim 5, 11, 20, 32

Watkins et al. ('383) substantially teaches the claimed invention except that it does not show that the lenslet array directs light oblique angle to the substrate surface. Hendler et al. ('212) shows that it is known to provide a lenslet array directing light to a surface at an oblique angle (See Fig. 4a) for an optical inspection apparatus. It would have been obvious to combine the device of Watkins et al. ('383) with the oblique angle of Hendler et al. ('212) for the purpose of providing illumination of the different features of the surface, therefore increasing the sensitivity of the measurements.

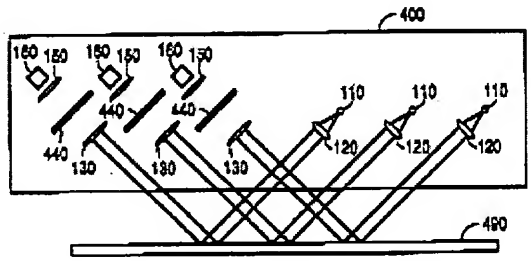

FIG. 4A

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Stafira whose telephone number is 571-272-2430. The examiner can normally be reached on 4/10 Schedule Mon.-Thurs..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael P. Stafira
Primary Examiner
Art Unit 2877

October 21, 2005